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Attorneys for Defendant RUSSELL TAYLOR OTT

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA**

UNITED STATES OF AMERICA,

No. CR 17 533 EMC

Plaintiff,

**REPLY TO UNITED STATES RESPONSE
TO DEFENSE LETTER REQUEST FOR
CAST EXPERT DISCOVERY**

v.

RUSSELL TAYLOR OTT,

Date: December 15, 2020

Defendant.

Time: 9:00 a.m.

Crtrm: Magistrate Judge Beeler

**TO: THE UNITED STATES ATTORNEY FOR THE NORTHERN DISTRICT OF
CALIFORNIA; ASSISTANT UNITED STATES ATTORNEYS KEVIN BARRY,
AJAY KRISHNAMURTHY, AND LINA PENG; AND TO THE CLERK OF THE
ABOVE-ENTITLED COURT:**

The defendants hereby reply to the United States' Response to Joint Defense Letter Request for CAST Expert Discovery. (Dkt. No. 1356) A separate reply will be filed by counsel for defendant Brian Wendt.

The government's promised supplemental disclosure by Agent Sparano after the last discovery hearing in August is worthy of some discussion.

**REPLY TO UNITED STATES RESPONSE TO DEFENSE
LETTER REQUEST FOR CAST EXPERT DISCOVERY**

1 Over numerous paragraphs Agent Sparano discusses various means of establishing a
2 footprint (potential coverage area) of a cell tower. These methods include a drive test, an
3 engineering phone, and cell tower surveys, none of which were actually employed in this case.

4 Agent Sparano goes on to say that she conducted historical cellular analysis in accordance
5 with the methods laid out in her disclosure, but she really did not use any of the methods she
6 describes - other than looking at the CDRs and the cell tower locations.

7 Agent Sparano also talks about “known facts being considered” in compiling results
8 and/or conclusions in an official report and/or presentation for use by investigators or at trial.
9 (Paragraph 6) However, there is no mention of any “known facts” being utilized, other than
10 CDRs and cell tower sites, in what is labeled as her disclosure.

11 The relative hollowness of Agent Sparano’s disclosure in light the Court’s FRE
12 702/Daubert gate-keeping function in a “historical” case where locations are determined years
13 after an alleged event or events is why the defense is bringing this motion before the Court.

14 The government claims that “[c]ell site analysis is a well-established and accepted law
15 enforcement tool, and agents from the FBI’s Cellular Analysis Survey Team (CAST) have
16 routinely been recognized as qualified experts in this field—including in this district.” The
17 government seeks support for this position by citation to *United States v. Hill*, 818 F.3d 289 (7th
18 Cir. 2016). The government claims that the *Hill* Court found “that historical cell site science is
19 ‘well understood, ‘can show with sufficient reliability that a phone was in a general area’ and
20 ‘the technique has been subjected to publican and peer criticism, if not peer review’”. The
21 problem with this citation, however, is that the portion of the opinion cited by the government is
22 simply the Court’s description of the historical cell site analyst’s testimony.

23 The *Hill* Court was actually critical of the agent’s summary testimony in that case and
24 emphasized that the historical cell-site analysis testimony gatekeeping inquiry must be tied to the
25 facts of a particular case. *Id.* at 297. The bank robbery at issue in *Hill* is a far different case than
26 the alleged homicide here. Moreover, the issue on appeal was whether the district court abused
27 its discretion in admitting evidence at trial - a rather low bar - and not an expression that the
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1 “science” of “cell site analysis” is valid. In fact, the *Hill* Court cautioned: “Our concern is that
2 the jury may overestimate the quality of the information provided by this analysis. We therefore
3 caution the government not to present historical cell-site evidence without clearly indicating the
4 level of precision - or imprecision - with which that particular evidence pinpoints a person's
5 location at a given time.” *Id.* at 299. Thus, the government overstates the state of the law
6 regarding cell site location information as being a well-established and accepted law enforcement
7 tool.

8 Looking to past cases for guidance carries other problems. Although radio frequency
9 theory has remained constant over the years, cell phone technology has changed. Currently,
10 phone carriers are updating cell sites to handle 5G technology. The current 4G technology
11 started in late 2010. In short, the evolution of cell phone technology outpaces past judicial
12 opinions. Moreover, over the years, CAST has changed the way it represents the purported
13 coverage area of a cell site. Previously, CAST represented the purported coverage area of a cell
14 site by use of a closed wedge, which was misleading because radio waves do not stay within the
15 wedge. More recently, CAST switched to a semi-closed wedge to demonstrate the purported
16 coverage area of the cell site. This matters because as is evident from Agent Sparano’s
17 supplemental disclosure, the wedge does not accurately display the distribution of radio waves
18 from an antenna.

19 Furthermore, Agent Sparano’s draft reports show that for towers with three sectors, each
20 sector is the same size and has the same coverage area, with a horizontal beam width of 120
21 degrees. In the practice, each sector of a cell site is specifically engineered to cover a specific
22 area. Despite this, Agent Sparano portrays in her presentations that each antenna on a cell site is
23 the same. That attempt to shovel the realities of radio frequency theory into a wedge is simply
24 wrong. The supplemental disclosure from Agent Sparano shows that in practice, when field
25 surveys are completed, radio waves are not confined to a wedge. And although Agent Sparano
26 discusses the government’s ability to conduct a field survey to determine more precise location
27 data of a cellular network, none was performed in this case. The government’s failure to conduct
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1 a field survey is significant. When the government conducts a field survey, they can use the
 2 results to verify the mapping done with call detail records. The failure to do so here means that
 3 the government has not verified Agent Sparano's results.

4 The defense has tried repeatedly to get information from the government regarding Agent
 5 Sparano's training, which is the stated basis for her opinions. These materials are not publicly
 6 available. Without them, the defense cannot effectively cross-examine her to determine why she
 7 reached her conclusions. This is important because in the past, the FBI's failure to properly train
 8 alleged forensic practitioners has lead to disastrous results. *See*
 9 [https://slate.com/news-and-politics/2015/04/fbis-flawed-forensics-expert-testimony-hair-analysis](https://slate.com/news-and-politics/2015/04/fbis-flawed-forensics-expert-testimony-hair-analysis-bite-marks-fingerprints-arson.html)
 10 [-bite-marks-fingerprints-arson.html](https://slate.com/news-and-politics/2015/04/fbis-flawed-forensics-expert-testimony-hair-analysis-bite-marks-fingerprints-arson.html).

11 Finally, the defense is not aware of Agent Sparano's ultimate conclusions. The
 12 demonstrative exhibits from the government, Sparano I and II, are simply that: a demonstrative
 13 aid which she apparently calls a "presentation" as opposed to an "official report". They do not
 14 provide a summary of Agent Sparano's conclusions, or the basis thereof.¹ The proposed changes
 15 to Federal Rule of Criminal Procedure 16, though not in effect, are still illustrative. The new
 16 Rule, if enacted, provides that the government's disclosure "must contain...a complete statement
 17 of all opinions that the government will elicit t from the witness in its case-in-chief, or during its
 18 rebuttal to counter the testimony that the defendant has timely disclosed...." Rule
 19 16(a)(1)(G)(iii). And this statement must be in writing. The reason for the change, in part,
 20 according to the Rule 16 Committee was the current version of the Rule uses the term
 21 "summary." The changes reflect that discovery disclosures should be complete and in writing.
 22 Here, the government has complied with neither. Although the changes remain pending, they are

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24 ///

26
 27 ¹ The government's refusal to provide the underlying PowerPoint further complicates
 28 things. The current version of the exhibit lacks movement and meaning. At a minimum, we
 request the Court order the government to provide the actual PowerPoint presentation.

1 at least aspirational, and ones this Court should order in this case.

2
3 Dated: December 11, 2020

Respectfully submitted,

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5 /s/

ROBERT WAGGENER
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RUSSELL TAYLOR OTT